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ABSTRACT

In this study, Maui Community College examines the potential employment demand for entry-level automotive technicians on the island of Maui in Hawaii. A requirement for ASE certification by National Automotive Technicians Education Foundation, Inc. is that the college ascertain on a regular basis the community demand for trained automotive technicians, in order to better meet the employment needs of the community it serves. During the spring 2000 semester, a cover letter and questionnaire were sent to 61 businesses from the automotive technology (AMT) field. The 13 companies that responded employ 68 auto technicians, of which roughly one out of every four is at an entry level for which AMT grads would qualify. Statistics imply an employment demand for six AMT graduates to fill six additional entry-level positions, with perhaps another 22 openings for grads as a result of entry-level workers moving up to fill 22 additional journeyman positions. Within 12 months, respondents expected to hire 19 new entry-level employees. Respondents rated "Good Work Attitude and Good Work Habits" as important work skills. "Team Player" and "Basic Mechanical Skills" were also rated consistently high. Frequent methods of recruitment are "Seek referrals from employees" and "Advertise in local paper." Appendices are included. (JA)

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ED 444 618

Development & Implementation of a Community Needs Assessment in Automotive Technology (AMT)
Maui, Hawaii

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

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TC 000552

Submitted by

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Maui Community College
Summer 2000

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Development & Implementation of a Community Needs Assessment in Automotive Technology (AMT)

Maui, Hawaii

Maui Community College
Summer 2000

Purpose

The purpose of this study was to ascertain the potential employment demand for entry-level Automotive Technicians on the island of Maui in Hawaii. A requirement for ASE certification by NATEF (National Automotive Technicians Education Foundation, Inc.) is that the College ascertain on a regular basis the community demand for trained Automotive Technicians, in order to better meet employment needs of the community it serves.

This year's procedure represents a culmination of efforts that developed and field-tested an appropriate survey instrument and then defined and evaluated a methodology for distribution of the survey on an on-going basis.

Methodology

Serving on the Methodology Development Team (Appendix A) were the Automotive Technology Coordinators/Instructors, the Automotive Technology Community Advisory Committee, and the Assistant Dean of Instruction, under auspices of the Dean of Instruction.

During the Spring 2000 semester, a cover letter (Appendix B) and questionnaire (Appendix C) were drafted. A mailing list was generated of businesses from the Automotive Technology field by consulting a variety of sources, including the AMT Advisory Committee, AMT Instructors, and yellow pages of the *1999 Maui County Telephone Directory*. All related companies were included from the following broad sectors: Automobile Dealers (5), Rent-A-Car Companies (5), Service Stations (6), Auto Parts Stores (1), High Schools (3), General Repair Shops (24), and Specialty Repair Shops (11) such as those in tire, radiator, air conditioning, and machine repair. The mailing list encompassed all 61 non-duplicate Automotive companies situated on Maui.

On April 25, 2000, the 61 questionnaires were mailed, along with the cover letter and a postage-paid return envelope. Six (6) addresses were returned as non-deliverable, resulting in a residual sample size of 55. The number of respondents was 14, for a return rate of 25.5 percent. One survey was returned blank, dropping the number of usable returns to 13. Caution should be given when interpreting these data, since the results are based on so few respondents.

Results

A. Current Employment Levels

Question #1 assessed the current level of employment on Maui for both entry-level and for

TABLE Q1:
Number Technicians Employed Currently

Level	*#1*	*#2*	*#3*	*#4*	*#5*	*#6*	*#7*	*#8*	*#9*	*#10*	*#11*	*#12*	*#13*	*All*
Entry-Level	0	0	1	1	1	1	1	1	2	2	3	3	4	**20**
Journeyman	3	3	0	1	2	4	4	6	7	5	1	9	3	**48**
Overall	3	3	1	2	3	5	5	7	9	7	4	12	7	**68**

- The13 respondents employ 68 Auto Technicians.
- Entry-level Technicians comprise 29 percent (n = 20) of the employment, while journeymen account for 71 percent (n = 48).
- Most respondents (10, 77%) employ no more than two (2) entry-level Technicians.
- In sum, the 13 businesses responding to the survey represent 68 Automotive Technician positions, of which roughly one out of every four is at an entry level for which AMT grads would qualify.

B. Preferred Employment Levels

Question #2 asked respondents to report how many Technicians they would like to add today if qualified candidates were available (see Table Q2).

TABLE Q2:
Number of Additional Technicians Preferred

Level	*#1*	*#2*	*#3*	*#4*	*#5*	*#6*	*#7*	*#8*	*#9*	*#10*	*#11*	*#12*	*#13*	*All*
Entry-Level	0	0	1	0	0	0	0	0	2	1	1	0	1	**6**
Journeyman	2	2	0	1	1	2	0	0	3	1	2	1	1	**16**
Overall	2	2	1	1	1	2	0	0	5	2	3	1	2	**22**

- Total number of desired new hires is 22: 6 entry-level and 16 journeyman.
- This statistic implies an employment demand for six AMT graduates to fill the six additional entry-level positions, with perhaps another 22 openings for grads as a result of entry-level workers moving up to fill the 22 additional journeyman positions.

C. Expected Employment Levels

Questions #3 and #4 requested the number of entry-level Technicians the respondent expects to hire in the next 12 months and in the next 5 years, and whether the need may be due to replacement of current employees or to expansion of the business.

- Within the 12 months, respondents expect to hire 19 new entry-level employees.
- The purpose for hiring is about evenly split between Replacement and Expansion (9 and 10, respectively). Perceived expansion may reflect a positive attitude toward the immediate future of the economy.
- The range of demand is quite diverse. One respondent (#13) accounts for a third of next year's demand (n = 6, 32%). Whereas, some businesses (n = 4, 31%) expect to hire none at all next year.

TABLE Q3 & Q4:
Number of Entry-Level Hires Expected

Reason for	*#1*	*#2*	*#3*	*#4*	*#5*	*#6*	*#7*	*#8*	*#9*	*#10*	*#11*	*#12*	*#13*	*All*
Next 1 yr:														
Replacement	0	0	0	0	0	0	0	0	1	1+	2	0	5	**9**
Expansion	1	2	1	0	0	1+	0	3	1	0	0	0	1	**10**
Overall	1	2	1	0	0	1+	0	3	2	1+	2	0	6	**19**
Next 5 yr:														
Replacement	0	0	0	0	1	0	0	1	5	1+	4	0	25	**37**
Expansion	2	2	2	0	0	1+	0	2	0	0	0	3	5	**17**
Overall	2	2	2	0	1	1+	0	3	5	1+	4	3	30	**54**

Note. – 1+ indicates respondent checked box without specifying the number, allocating a value of at least one (1).

- Over the next five years, respondents expect to hire 54 new entry-level Technicians.
- The 54 hires spread over five years average out to 10.1 hires per year – fewer than that generated from the 1-year question.
- Again, respondent #13 accounts for much of the demand (n = 30, 56%), while several businesses (n = 2, 15%) expect to do no hiring in the 5-year period.
- Replacement accounts for much (n = 37, 69%) of the 5-year hires. Note, however, how the statistic balloons with the single response from #13 for 25 replacements.
- A yearly employment demand of 10-19 would absorb some of the 30 annual AMT majors. *(Ed. note. – Assuming the current 60 AMT majors take two years to graduate, then statistically half of the them (30) would be available each year to fill the 10-19 expected positions.)*

D. Length of Entry-Level Vacancies

Question #5 queried respondents on how quickly they are able to fill open positions for entry-level Technicians.

TABLE Q5:
Time Needed to Fill Vacancies

Wait	*No.*	*Percent*
1 Week	4	31%
2 Weeks	2	15%
1 Month	1	8%
6 Months	3	23%
Other	*1	8%
Blank	2	15%
TOTAL	13	100%

**Note. – Depends on qualifications.*

- Many (n = 4, 46%) report needing just 1-2 weeks to fill entry-level vacancies.
- Note another grouping (n = 3, 23%) that reports needing six months to adequately fill these positions.

E. Starting Wage

Question #6 assessed the starting wage generally paid to entry-level Technicians.

TABLE Q6:
Starting Wage at Entry-Level

Wage	*No.*	*Percent*
Minimum	0	-
$6-8/hr.	5	38%
$9-11/hr.	8	62%
$12+/hr.	0	-
Blank	0	-
TOTAL	13	100%

- An hourly wage of $9-11 is paid to the entry-level Technician by most (n = 8, 62%).
- The other respondents pay a lower wage of $6-8 per hour (n = 5, 38%).

F. Length of Service

Question #7 queried how long the typical entry-level Technician stays at that level before advancement.

TABLE Q7:
Length of Service at Entry-Level

Time	*No.*	*Percent*
Less than 1 year	3	23%
1-2 Years	6	46%
2-3 Years	2	15%
3+ Years	0	-
Blank	2	15%
TOTAL	13	100%

- Many companies (46%) report that entry-level Technicians stay at that level for 1 to 2 years before advancing.
- Three companies report the time is shorter -- less than a year.
- About the same number of companies (2) report the time takes longer -- 2-3 years.
- These statistics support a general consensus for about 2 years before advancement.

G. Importance of Various Skills

Question #8 asked respondents to rate the importance of various skills for success as an entry-level Technician on a scale from 1 to 5, with 1 = very and 5 = not important.

TABLE Q8
Work Skills Rated in Importance

Skill	*1*	*2*	*3*	*4*	*5*	*Ttl*
Good Work Attitude	11	1	1	0	0	13
Good Work Habits	11	0	1	1	0	13
Team Player	10	1	1	1	0	13
Basic Mechanical Skills	10	1	0	0	2	13
Good Communication Skill	9	2	2	0	0	13
Quality of Work	9	2	1	1	0	13
Personal Hygiene	6	4	2	0	1	13
Other	1	*(People skills)*			12	13
Overall	67	11	8	3	15	104

- The top rating of "1" was most consistently awarded to: Good Work Attitude and Good Work Habits (n = 11, 85%).
- Also with consistently high ratings of "1" were: Team Player and Basic Mechanical Skills.
- The only skill with relatively lower and more dispersed ratings is: Personal Hygiene.
- In truth, all listed skills were judged important.

H. Recruitment Methods

Question #9 researched how often various approaches are used to attract entry-level Technicians on a scale of 1 to 5, with 1 = most often and 5 = not at all.

TABLE Q9
Methods of Recruitment

Skill	*1*	*2*	*3*	*4*	*5*	*Blank*	*Ttl*
Seek referrals from employees	4	1	4	0	0	4	13
Advertise in local paper	3	2	1	2	2	3	13
Recruit at local schools	3	1	2	1	1	5	13
Recruit from local repair shops	0	4	1	0	3	5	13
Use file of available applicants	0	1	3	0	3	6	13
Recruit from out-of-state	0	0	1	0	6	6	13
Other	3	*(recruit from within; trade school; word of mouth & trade school)*				10	13

- Most frequent method of recruitment is: Seek referrals from employees.
- Another popular strategy is: Advertise in local paper. (Four respondents circled the *Maui News*.)
- An alternative method is recruitment at local schools. (One respondent circled MCC.)

I. Importance of Various Skills

The final question asked respondents to indicate how the MCC Automotive Technology program might serve them better. Comments included:

- It might help to have a more advanced class, such as diagnostics. This seems to be a weak area. We employ one MCC graduate. He is a wonderful employee, but could have used more knowledge in this area.
- Participate in manufacturer on-site training, e.g., Ford Assett program (Leeward CC), Chrysler Plymouth Dodge, Toyota (Honolulu CC).
- I would like to see MCC get more involved in placement: 1) referrals, 2) classes and training, 3) personal contact.
- It may provide a better pool of qualified technicians in this demanding profession.
- They're doing a fine job!

Appendix A
Methodology Development Team

Automotive Technology Instructors

Hollis Lee, Vocation-Technical Division Chair & AMT Instructor

Thomas Hussey, AMT Coordinator and Instructor

Automotive Technology Community Advisory Committee

Tim Hultquist – Island Dodge (Chairperson)

Mike Facer, Cutter of Maui

Gail T. Fujimoto – Hawai`i State Consumer Complaints on Maui

Laura McLean – United Auto Parts

Nathan Perreira – Pacific Heavy Equipment & Auto Repair

Chester Rafanan – Cutter of Maui

Kyle Sera – Maui High School

George Seriguchi – Retired AMT Instructor

Karl Takushi – A & K Auto Repair

Office of Dean of Instruction

flo wiger, Dean of Instruction

Jeannie A. Pezzoli, Assistant Dean of Instruction

Maui Community College
UNIVERSITY OF HAWAII
OFFICE OF THE PROVOST

April 19, 2000

Dear Automotive Repair Employer:

The Maui Community College program in Automotive Technology is taking the necessary steps to prepare for national accreditation by the National Automotive Technicians Foundation (NATEF), which is under the national institute for Automotive Service Excellence (ASE). A NATEF requirement is that the College gain direct feedback from potential employers regarding employment requirements for entry-level Automotive Technicians on Maui.

Your feedback on this survey will help Maui Community College better prepare and graduate students who meet your needs and the needs of the automotive repair industry. The MCC Automotive Technology program currently enrolls over 60 majors -- and it is continuing to grow. A full range of courses is offered leading to the Certificate of Achievement and the Associate in Applied Science degree. This coming Fall term is offeromg six day classes: Electrical/Electronics I & II, Heating/Air Conditioning, Power Train, Automatic Transmissions, and Emission Systems; two evening classes: Fuel Systems, Suspension/Steering; and one class on Saturdays: Intro to Auto Mechanics.

We are requesting your assistance by filling out the enclosed questionnaire, which should take about five minutes. Please complete the form, supplementing any comments you might want to add, and return it within the next 5 days in the enclosed postage-paid envelope.

Should you have further questions regarding the MCC Automotive Technology program, please feel free to contact me or program instructors Hollis Lee and Thomas Hussey at 984-3236. Thank you for your assistance.

Clyde M. Sakamoto, Ed.D.
Provost

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Phone (808) 242-1213, 242-1209 • Fax (808) 244-0862

An Equal Opportunity Employer

MAUI COMMUNITY NEED FOR AUTOMOTIVE TECHNICIANS

Maui Community College
Spring 2000

In order to better meet your needs, MCC requests your assistance and feedback.

1. How many Technicians do you currently employ?
   ___ Number of entry-level
   ___ Number of journeyman

2. How many more Technicians would you like to add today, if qualified applicants were available?
   ___ Number of entry-level
   ___ Number of journeyman

3. How many entry-level Technicians do you expect you'll hire in the next 12 months?
   ___ Number due to replacement
   ___ Number due to expansion

4. How many entry-level Technicians do you estimate you'll hire in the next 5 years?
   ___ Number due to replacement
   ___ Number due to expansion

5. How quickly are you able to fill open positions for entry-level Technicians? *(check one)*
   ___ 1 week
   ___ 2 weeks
   ___ 1 month
   ___ 6 months
   ___ Other; specify _____

6. What starting wage do you generally pay to entry-level Technicians?
   ___ Minimum wage
   ___ $6-8 per hour
   ___ $9-11 per hour
   ___ $12+ per hour

7. How long does the typical entry-level Technician stay at that level before advancement?
   ___ Less than a year
   ___ 1-2 years
   ___ 2-3 years
   ___ 3-4 years
   ___ 4+ years

8. How important is each skill for success as an entry-level Technician? *(Rate each on a scale from 1-5, with 1 = very and 5 = not important.)*
   ___ Basic mechanical skills
   ___ Good work habits
   ___ Good work attitude
   ___ Good communication skills
   ___ Team player
   ___ Quality of work
   ___ Personal hygiene
   ___ Other; specify _____

9. How often do you use each approach to attract entry-level Technicians? *(Rate on a scale of 1-5, with 1 = most often and 5 = not at all.)*
   ___ Advertise in local newspaper: *(circle)*
      Maui News
      Other: specify _____
   ___ Recruit from local schools: *(circle)*
      MCC
      Local high school; specify _____
   ___ Recruit from local repair shops
   ___ Recruit from out-of-state
   ___ Seek referrals from current employees
   ___ Use file of available applicants
   ___ Other strategy; specify _____

10. Indicate how the MCC Automotive Technology program might serve you better?

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Return form in the enclosed postage-paid envelop within the next 5 days, or mail to : Dr. JA Pezzoli, Assistant Dean of Instruction, Maui Community College, 310 Kaahumanu Avenue, Kahului, Maui, HI 96732.